DRAFT

UNITED STA[illegible] ENVIRONMENTAL PROTECTION [illegible]NCY

SUBJECT: Status Report on Questions Raised by Governor of Laguna Pueblo

DATE: July 27, 1976

FROM: Charles W. Northington, Regional Representative
Office of Program Integration

TO: John C. White
Regional Administrator

Mr. Gilbert Pacheco, Acting Governor, Pueblo of Laguna, posed a series of questions concerning the quality of the environment on the Laguna Reservation in October 1975.

Subsequent to this request, EPA, EIA and Indian Health Service officials met to review the questions and to seek answers.

On June 15, 1976, an oral presentation of the status was made to the Laguna Council.

On July 15, 1976, EPA, EIA, DOI, and Laguna officials met to assess the evaluations made to date and to attempt to assign work responsibilities and schedules for obtaining additional information where necessary.

The following individuals were in participation:

Name	Representing
Russell Rhoades	New Mexico EIA, Santa Fe
Jon T. Thompson	New Mexico EIA, Santa Fe
Lee Lockie	New Mexico EIA, Air Quality, Santa Fe
Walter Shurkin	OHS
Pat White	New Mexico EIA, Albuquerque
Richard Blubaugh	New Mexico EIA, Grants
Pat Donahoe	New Mexico EIA, Santa Fe
Joe Pierce	New Mexico EIA
Ken Hargis	New Mexico EIA
Raymond P. Churan	DOI, Albuquerque
T. J. Castor	DOI, Mesa
D. J. Markley	EPA, Dallas
A. L. Topp	RPS, EIA
Ted Wolff	RPS, EIA
John Dudley	New Mexico EIA, Water Quality
Thomas E. Baca	Acting Director, New Mexico EIA
Charles Northington	EPA, Dallas
Maxine Goad	New Mexico EIA, Water Quality
Donald W. Hendricks	EPA/ORP Las Vegas
Mala L. Beard	USPHS/Indian Health - Grants
George Worsham	BIA, Laguna

The questions posed by the Governor, Pueblo of Laguna, and evaluations are present as follows:

Air Pollution

1. Question - What is the amount of respirable dust in the air in the village of Paguate and what are the health hazards from such?

   Answer - Based on limited information collected by EIA in 1974-75 and in 1976, we do not believe the respirable dust in Paguate is a significant health hazard. However, the EIA will continue to conduct a sampling program and expects to have an evaluation completed by January 1977.

2. Question - What per cent silica is the respirable dust and is the silica or other dusts of an amount that would cause pneumoconiosis problems?

   Answer - We have not been able to ~~accurately~~ determine the amount of silica in the respirable dust in Paguate. However, based on the amounts of respirable dusts estimated from the Total Suspended Particulates measured to date, we do not believe there is significant danger of pneumoconiosis from this source. Nevertheless, EIA is preparing and will conduct sampling to determine the amounts of silica in the respirable dust. This, too, should be completed about January 1977.

3. Question - What amount of the dust is radioactive in the mine itself and in the vicinity of the mine and is it of an amount that would cause health problems?

   Answer - Based on limited data from particulate samplers and radon sampling in June of 1976, we do not believe there is an acute hazard. EPA will continue the five particulate samplers begun last December until one year's sampling data has been collected. This data, along with the radon data, will be evaluated as the particulate data becomes available. Although we can't project when the particulate data will all be available, we will keep you advised if significant data shows up.

   In regards to the radioactivity in the mines, MESA assures us that the mine areas are being satisfactorily maintained. However, some questions arose as to conditions during atmospheric inversions. Therefore, we plan to do some 24-hour sampling in the mines and pits. We expect that MESA and the State will do this sampling.

4. Question - How different is the quality of air in the vicinity of Paguate and Jackpile Mine from other areas of the Laguna Reservation?

   Answer - One would expect the mines to have little impact if any on the ambient air at distances greater than a few miles.

   We expect to be able to give a more definitive answer after planned studies are completed.

5. Question - What is the amount of CO, NO, Benzene, and other products of fuel combustion in the air of Paguate Village and how different is the amount of these from other areas of the reservation?

   Answer - This is not believed to be a significant problem. However, EIA will handle this determination this winter since cold weather is suspected of being the most severe conditions. Mine areas will be sampled for NO, ~~while~~ modeling will be used to screen for CO testing sites.

6. Question - Are the environmental protection (air pollution) provisions of the new Sohio uranium mill adequate to protect the quality of the air in the vicinity of the Reservation?

   Answer - We do not believe ths Sohio uranium mill will pollute the air in the vicinity of the reservation. The environmental report prepared by Sohio was reviewed by EIA and deemed to afford adequate protection, except that no consideration was given to possible radiation. Sohio will operate its own monitoring and surveillance system which will be monitored by EIA. As soon as possible, radiation monitoring will be included if found desirable.

Surface Water Pollution

1. Question - What amount of silt in the Rio Paguate stream are the result of erosion from the mine tailings at Jackpile Mine, especially from the area where the ore is stockpiled and from the pits from which the high grade ore is extracted?

   Answer - This question will require field investigation. At the present time, no one has available resources. However, EIA recognizes this as part of the whole Grants Mineral Belt problem and will make an early assessment of the problem to determine if priorities and schedules should be reordered. This may move these investigations higher on the priority list. We expect to know in October 1976 what EIA can do.

2. Question - Are Anaconda's environmental protection procedures adequate to prevent contamination of the Rio Paguate and Rio Moquino streams by lubricants, trash or other debris?

   Answer - We feel that this matter is being adequately handled. The Environmental Improvement Agency, Regions I and III offices, and the Indian Health Service met with Anaconda officials earlier this year and were assured that adequate protection was being provided to prevent contamination of the Rio Paguate and Rio Moquino streams from lubricants, trash or other debris.

3. Question - Are the levels of pollutants (especially heavy metals and salts) carried by the Rio Paguate or Rio Moquino significant enough to affect irrigation and cattle watering downstream?

   Answer - This question will require field investigations. At the present time, no one has available resources. The comment under question No. 1 of this section applies.

4. Question - Are Sohio's environmental protection provisions for the new uranium processing mill adequate enough to protect the quality of water in the Rio Paguate and Rio Moquino?

   Answer - This question was addressed in the licensing review of the Sohio Uranium Mill and as expressed in a letter from Aaron Bond to Mr. Roland Johnson, April 8, 1975, it was indicated that predicting possible magnitude of any ground water contamination problem in the future was very difficult if not impossible. However, Sohio intends to utilize improved technology to monitor seepage from tailings ponds. The monitoring system is designed to both detect seepage before it adversely affects the ground water resources and allow adequate time for appropriate remedial action to prevent ground water degradation. While the monitoring effort is conducted by the Sohio company, the data is submitted periodically to the Environmental Improvement Agency for review and evaluation. This allows EIA to periodically determine effectiveness of Sohio's monitoring system and thus any impact on the ground water in the area.

5. Question - What health and environmental effects result from the water collected in the Mine Pits? Is the radioactivity level and other chemicals in the ponds affecting the water table, livestock and wild game in the area?

   Answer - This question will require field investigation. At the present time, no one has available resources. The comment under question No. 1 of this section applies.

Subsurface Pollution

1. Question - Are the pollutants carried by the Rio Paguate or Rio Moquino significant enough to affect the ground water below the Anaconda Jackpile Mine? (Preliminary drilling indicates that water could be found two feet below the surface in the mining area).

   Answer - We do not believe this to be a problem at this time. However, additional data is needed to determine whether or not it is a potential problem. This matter will be considered further by EIA in its overall evaluation of priorities and schedules. We expect to know in October 1976 what EIA can do.

2. Question - Are the proposed tailings ponds for the Sohio Mill adequate to prevent pollution of subsurface waters downstream from the mill?

   Answer - Review of Sohio's Uranium Mill environmental impact statement indicated satisfactory address for control of tailings ponds. Additionally, in Mr. Steve Reynolds' (State Engineer) letter of February 20, 1975, to Mr. Johnson, he indicates that his staff has reviewed the plans and specifications of the proposed tailing dam and found that the dam proposed would be structurely sound. The plans were approved on June 14, 1974 by the State Engineer's Office.

3. Question - How much ground water will the Sohio uranium mill use and how will it affect the water table in the Paguate area?

   Answer - We do not find this a problem under present conditions.

   Mr. Steve Reynolds' reply to Mr. Johnson of February 20, 1975, indicated that while there will be some depletion of the ground water from the Mancos-Dakota-Morrison Aquifer complex in the L-Bar Ranch Mine vicinity, surface runoff in the stream should replenish any depleted storage almost every runoff season. Therefore, it would suggest that ground water storage depletion of the alluvial deposits due to the operation of L-Bar Ranch Mine facility would be negligible.

   However, additional operations in the area may have an adverse impact. USGS is the best source of information in this regard. Therefore, we recommend that the Governor seek advice directly from USGS

4. Question - What are the chemical levels in the drinking water at Jackpile Mine, how often is the water tested, has the quality of water varied over the years, and does it conform to the latest revision of the Safe Drinking Water Act (P.L. 93-523)?

   Answer - We do not believe this a problem at the present.

   Three wells used for potable supply at the Jackpile mine were sampled on February 28, 1975 for selected trace metal, radiochemical and nitrogen species analysis. Concentrations found comply with new EPA drinking water standards; however, levels of dissolved radium 226 in the new shop well and well P-19 are above background levels and approaching the new EPA radium standard of five picocuries per liter. If periodic sampling of these wells demonstrates a violation of the radium standards, then their use as potable supply sources should be discontinued. Other nearby wells are available which yield much lower values of radium (e.g., Anaconda Jackpile well #4 and the Paguate municipal supply well). The EIA does not periodically test the water at the Jackpile mine and the agency has no data to indicate whether the quality of water has varied over the years.

   EIA has stated that they will sample this supply if requested to do so by the appropriate authorities.

Noise, Vibration, and Solid Waste Pollution

1. Question - What are the levels of noise coming from Jackpile Mine by the time it reaches Paguate and are they significant enough to cause hearing loss or psychological stress.

   Answer - This question needs additional study.

   On June 1, 1976, noise levels were measured at the edge of the Jackpile mine pit and found to be 60 to 62 dB(A). However, the measurements were taken in the absence of any blasting activity occurring that day. The levels obtained are within acceptably safe standards and would not be considered to cause hearing loss. The question of noise and its relationship to psychological stress is one that researchers are still investigating. However, it would appear that the noise measured is the normal activity noise of the community and not at significant levels.

   Additional studies will be done by the Indian Health Service with noise measuring equipment loaned by EPA Region VI and/or EIA.

2. Question - Are the blasting impacts strong enough to cause building damage?

   Answer - Assistance may be available from Sandia. The Department of Interior representative will follow-up on this question.

3. Question - Are the tailings or overburden of such a radioactive level that they would be dangerous to use for building material (especially homes)?

   Answer - Although limited studies have found no problems, we believe this may be a potential problem. Thus, we recommend that tailings and overburden not be used for building materials or building sites until an evaluation is made.

   The Indian Health Service will conduct an awareness program while MESA works with the mines to discourage people from using these standards.

   It is not clear at this time when additional radiological work can be accomplished.